

Amendments to the Specification

Please replace the paragraph from page 2 line 26 to page 3 line 29 with the following amended paragraph:

Therefore, the present invention, in accordance with a general aspect provides for a method for modifying the impedance of a semiconductor component, said semiconductor component comprising

a first conductive region defining a laid down base conductive path (i.e. initial path), said first conductive region comprising a first link member (or portion) and a second link member (or portion), said first region being a doped region having a heat modifiable dopant profile

and

a second region contiguous with the first region, said second region being a doped region having a dopant profile rendering said second region non-conductive relative to said first region,

said first and second link members being disposed in juxtaposition such that said first and second link members are separated by a gap region defined by said second region, said second region having a heat modifiable dopant profile, at least with respect to said gap region,

said method comprising applying a bridging cycle to one or more (i.e. at least one) preselected bridging areas,

each said bridging area comprising a gap region component comprising at least a portion of the gap region, a first link component comprising at least a portion of said first link member, and a second link component comprising at least a portion of said second link member,

so as to form a discrete conductive bridge across said gap region connecting said first link member and said second link member,

said bridging cycle comprising applying one or more heating/cooling treatments to one or more preselected target areas of a bridging area, each heating/cooling treatment comprising

directing a focused heating source to melt a preselected target area of a bridging area so as to thereby alter the dopant profile of the melted preselected target area

and

allowing said melted preselected target area to solidify with an altered dopant profile.

Please replace the paragraph from page 4 line 9 to page 5 line 12 with the following amended paragraph:

The present invention in accordance with a further aspect provides for a method for modifying the impedance of a semiconductor component, said semiconductor component comprising

a first laid down conductive region comprising a first conductive link member (or portion) and a second link member (or portion), said first region being a doped region having a heat modifiable dopant profile, said first conductive link member defining a laid down base conductive path (i.e. initial path)

and

a second region contiguous with the first region, said second region being a doped region having a dopant profile rendering said second region non-conductive relative to said first region,

said first and second link members being disposed in juxtaposition such that said first and second link members are separated by a gap region defined by said second region, said second region having a heat modifiable dopant profile, at least with respect to said gap region,

said method comprising applying a bridging cycle to one or more (i.e. at least one) preselected bridging areas,

each said bridging area comprising a gap region component comprising at least a portion of the gap region, a first link component comprising at least a portion of said first link member, and a second link component comprising at least a portion of said second link member,

so as to form a discrete conductive bridge across said gap region connecting said first link member and said second link member,

said bridging cycle comprising applying one or more heating/cooling treatments to one or more preselected target areas of a bridging area, each heating/cooling treatment comprising

directing a focused heating source to melt a preselected target area of a bridging area so as to thereby alter the dopant profile of the melted preselected target area

and

allowing said melted preselected target area to solidify with an altered dopant profile.

Please replace the paragraph from page 5 line 28 to page 6 line 13 with the following amended paragraph:

The present invention also relates to a semiconductor device or component which may be subjected to the herein described bridging cycle(s). Thus in accordance with another aspect the present invention provides an impedance tunable semiconductor component, said semiconductor component comprising

a first conductive region defining a laid down base conductive path, said first conductive region comprising a first link member (or portion) and a second link member (or portion), said first region being a doped region having a heat modifiable dopant profile

and

a second region contiguous with the first region, said second region being a doped region having a dopant profile rendering said second region non-conductive relative to said first region,

said first and second link members being disposed in juxtaposition such that said first and second link members or portions are separated by a gap region defined by said second region, said second region having a heat modifiable dopant profile, at least with respect to said gap region.

Please replace the paragraph from page 6 line 19 to page 7 line 2 with the following amended paragraph:

The present invention in another aspect also provides an impedance tunable semiconductor component, said semiconductor component comprising

a first laid down conductive region comprising a first conductive link member (or portion) and a second link member (or portion), said first region being a doped region having a heat modifiable dopant profile, said first conductive link member or portion defining a base conductive path

and

a second region contiguous with the first region, said second region being a doped region having a dopant profile rendering said second region non-conductive relative to said first region,

said first and second link members being disposed in juxtaposition such that said first and second link members or portions are separated by a gap region, defined by said second region, said second region having a heat modifiable dopant profile, at least with respect to said gap region.

Please replace the paragraph from page 18 line 16 to line 24 with the following amended paragraph:

More particularly, in accordance with of the present invention, there may be provided for an integrated semiconductor device which may be configured and disposed such that it comprises, two conductively interconnected areas or regions of relatively high dopant concentration which are spaced apart by a gap area or region of a relatively lower ~~(or no)~~ dopant concentration. Thus the area of lower ~~(or no)~~ dopant concentration may act as an insulator, between the two areas of higher dopant concentration. The dopant type and/or concentration thereof of the area of lower dopant concentration may be of a type and/or of a low enough concentration such that no or at least essentially no electrical current may flow there through.

Please replace the paragraph from page 22 line 27 to page 23 line 2 with the following amended paragraph:

Figures 1 to 5 illustrate example embodiments of a tunable semiconductor component or device in accordance with the present invention; the same reference numerals will be used for each of these figures to denote common or analogous elements. For each of Figures 1 to 5 the tunable semiconductor component or device is generally designated by the reference numeral 1. The device 1 in each case may comprise various layers or regions, for example, a non-conductive substrate or region 2, and a conductive layer or region 2a which is contiguous with the underlying substrate or region 2.

And

Please replace the paragraph from page 24 line 13 to line 21 with the following amended paragraph:

The region 2 has a dopant profile such that it is electrically non-conductive relative to the region 2a. Thus, the region 2 may ~~comprise no dopant~~ or be a lightly doped region. In any event, the region 2a as in the case of the region 2, at least in the gap region has a heat modifiable dopant profile. The gap region 5 may have a dopant profile which is the same as that of the rest of region 2; alternatively, the gap region 5 may have a dopant profile which is different from that of the rest of the region 2 provided that the dopant profile of the gap region is nevertheless such that the gap region is electrically non-conductive relative to the region 2a and in particular relative to the first and second link portions 3 and 4 thereof.